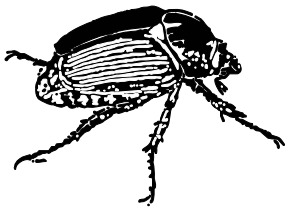

Program to Eradicate Japanese Beetle In Utah

Tempo®: An Adult Insecticide – Questions and Answers

What threat does the Japanese beetle pose to Utah and my neighborhood?
Japanese beetle (*Popillia japonica*) is a serious invasive insect pest threatening to invade western North America. Japanese beetle adults feed on the flowers, fruit and foliage of over 300 species of plants. The larvae attack the roots of turf and other plants. Both adults and larvae cause significant damage in the eastern U.S. where pesticides are often used to protect flowers, ornamental plants, trees, vegetable and fruit crops, and turf. Like other western states, Utah yearly seeks to detect quickly any introductions of this pest through a statewide trapping program.

Japanese beetle has been detected in this area. If not eradicated, Japanese beetle will relentlessly spread throughout Utah and the West. Effective eradication programs have required the use of pesticides to control both the adult and larval stages. Two to three years of applications are often needed to eradicate isolated pest populations. Extensive efforts are underway by western states, industry and the U.S. Department of Agriculture to prevent further introductions of Japanese beetle into the West.

What is Tempo®?
Tempo® is the trade name for an insecticide called cyfluthrin that is used on agricultural crops, and in urban settings. Tempo® is a synthetic pyrethroid insecticide that kills insects by contact and by stomach poison action. It is used to control a variety of chewing and sucking insects, including the Japanese beetle. Cyfluthrin controls crawling, flying and wood-infesting insect pests on indoor and outdoor surfaces. It is also used to control pests of trees, landscape ornamental plants, residential and commercial lawns, and food plants such as hops, cereal, corn, deciduous fruit, peanuts, potatoes and other vegetables. Tempo® is also used indoors to control insects in hospitals, food and feed handling establishments, homes and aircraft. Tempo® is also used to control stored product insects in pantries.

How will Tempo® be applied?
The Tempo® used in the Japanese beetle eradication program will be mixed with water. The spray mixture will be at rates shown on the product label. The Tempo® spray mixture will be applied by ground spray equipment operated by a licensed commercial pesticide applicator under the direct supervision of the Utah Department of Agriculture and Food. The spray will be applied to all trees, shrubs, flowers, weeds, turf and other plants that can serve as food or resting places for the Japanese beetle within the treatment boundaries.

How often will Tempo® be applied?
Tempo® breaks down rapidly in the environment and within about two to three weeks is no longer expected to be effective against the Japanese beetle. The first application will be made as soon as possible to kill beetles flying into the area or emerging during the summer adult flight period. Based upon the beetle life cycle several other Tempo applications may occur at about two week intervals.

Will Tempo® injure the foliage of plants?
Tempo® has been tested on a wide range of ornamental plants under various environmental conditions and no damage to plants has been observed.

Can I eat my garden vegetables after the Tempo® application?
Tempo® will not be applied to garden plants to be used for food since the product is not labeled for garden vegetables and fruit. Please alert us to any food plants on your property. As an alternative, food plants may be treated with another insecticide formulation that is a commonly used on garden vegetables and fruit. The Utah Department of Agriculture and Food will give you information about this other pesticide product if it will be used on your property. In general, health professionals recommend that people always wash and scrub all fresh fruits and vegetables under running water before cooking or eating them. Peel fruits and vegetables when possible to reduce dirt, bacteria, and pesticides. Discard outer leaves of leafy vegetables before cooking or eating.

Is Tempo® harmful to humans or their pets?
Researchers use animal studies to characterize the potential for a pesticide to cause harmful effects to human health. It is important to know that these tests are carried out with very high doses so that toxicity (poisoning) can be observed. Effects seen at toxic doses in animals are unlikely to occur in humans after any brief exposure to the spray application proposed for the Japanese beetle spray program. The level of exposure must be considered to estimate the risk of harmful effects. Based on laboratory studies, cyfluthrin is classified as moderately toxic to mammals on a short term (acute) basis when the cyfluthrin is swallowed. Cyfluthrin is rapidly broken down and excreted from the body. There is no evidence of cancer in laboratory studies with rats and mice given cyfluthrin. There is no evidence of endocrine effects in animal studies conducted with cyfluthrin, and there is no indication that cyfluthrin causes endocrine effects in humans. When applied according to the label instructions, the available toxicology information indicates that application of cyfluthrin (the active ingredient in Tempo®) should not pose a risk to human health or to pets.

How can I avoid exposure to Tempo® during the Japanese beetle eradication program?
Application to each residence should take less than half an hour. To minimize personal exposure, stay indoors during the application and keep your pets indoors. You and your pets may freely use your yard when the foliage has dried. The following precautions are recommended to minimize your exposure:

1. Close all windows and turn off or adjust your window air conditioner so it does not draw air from outside during the Tempo® application. Since application may begin early in the morning, you may wish to make these changes the night before the application date.

2. Move lawn furniture, children's and pet's toys indoors before the application. If this is not possible, wash all surfaces with soap and water after the application. Wear chemically resistant gloves (neoprene or nitrile) when washing these items. Try to avoid using excessive water that might remove the pesticide from the nearby turf and foliage keeping it from killing Japanese beetles.

3. Keep family members and pets indoors during the application on your or neighboring properties to limit exposure to spray. Wait until the foliage and grass has dried before allowing family members and pets to use your yard. You may smell an odor may until the Tempo® has dried. Encourage careful handwashing.

4. Avoid contact with wet Tempo® mixture on your skin and eyes. If contact is made, wash the affected skin thoroughly with soap and water. If the material should get into your eyes, flush your eyes with clean water for 10-15 minutes.

5. Get medical attention or contact the poison center (1-800-222-1222) -if irritation continues.

Will Tempo® cause harmful effects to other organisms or to the environment?
Cyfluthrin is considered moderately toxic to mammals, and is of low toxicity to birds. It is not likely to affect either of these groups when applied at the rates used in the Japanese beetle eradication program. Cyfluthrin is highly toxic to many beneficial insects including honeybees. However, the areas to be treated are small and any possible harm to beneficial insects by the program will be very localized. Tempo® is highly toxic to fish and aquatic insects. For that reason, application is prohibited over water; there will be no spraying over water in this program. As cyfluthrin has very low water solubility and is very immobile in soil, contamination of ground and surface water is unlikely. However, irrigation practices will be monitored to ensure that there is no surface runoff and precautions will be taken to ensure that there is no spray drift into surface water.

For Further Information:
Contact the National Pesticide Information Center (NPIC), 1-800-858-7378, http://npic.orst.edu, npic@ace.orst.edu . NPIC is a toll-free information service sponsored cooperatively by Oregon State University and the U.S. Environmental Protection Agency. NPIC provides objective, science-based information about a wide variety of pesticide-related subjects including pesticide products, pesticide poisonings, toxicology, and environmental chemistry.

Continuing Health Concerns?
If you have health-related questions or concerns, contact your physician (or veterinarian for your pets). No health effects are expected to occur among residents; however, if a resident feels an adverse health effect has occurred because of this program, please contact your physician the same day to establish whether it is related to the Tempo® application. Your physician may consult with Scott Everett - (801)536-4117, severett@utah.gov, a toxicologist with the Utah Department of Environmental Quality, who is familiar with cyfluthrin and its effects, or Wayne Ball - (801)538-6297, wball@utah.gov, a Health Program Manager with the Utah Health Department, or the Utah Poison Center (1-800-222-1222) in the event of a medical emergency.

For more information about Japanese beetle and this eradication program, visit the Utah Department of Agriculture and Food's web site at http://ag.utah.gov/pressrel/JBInfoPage.html, the Orem City web site at http://orem.org/. If further information is needed contact Utah State Extension's Adrian Hinton at (801)851-8460 or adrianh@ext.usu.edu, or Utah Department of Agriculture and Food's Clint Burfitt at (801)538-4912 or cburfitt@utah.gov.